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West Virginia Division of Environmental Protection

Cecil H. Underwood
Governor

Michael C. Castle
Director

WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY
1558 Washington Street, East
Charleston, WV 25311

v. CO-SIP-2000-1

PPG INDUSTRIES, INC.
Box 191
New Martinsville , WV 26155

CONSENT ORDER

I. AUTHORITY

Under the authority and direction of the Code of West Virginia, Chapter 22, Article 5, Section 1 et seq., this Consent Order is hereby entered.

II. FINDINGS OF FACT

1. PPG Industries, Inc., hereinafter referred to as the "Company", owns and operates a Chloro-Akali and Derivatives plant in Marshall County, West Virginia. Sulfur dioxide is emitted from numerous process and fuel burning sources at the facility including coal boilers, natural gas boilers, recovery operations, and flares.

2. On July 4, 1995, the United States Environmental Protection Agency ("USEPA") indicated agreement to resolve American Electric Power's ("AEP") petition filed on, or about, June 10, 1995 to modify the existing Federal Consent Decree affecting AEP's Kammer Plant located in Marshall County, West Virginia. The Federal Consent Decree modification would be granted under the condition that the West Virginia Division of Environmental Protection ("WVDEP") would commit, in writing, to develop a comprehensive State Implementation Plan ("SIP") revision and schedule that would include a sulfur dioxide ("SO_2") impact analysis from all relevant sources of SO_2 in the area, provide for an attainment demonstration of the SO_2 National Ambient Air Quality Standards ("NAAQS") and fulfill the requirement of Good Engineering Practices ("GEP").

3. During July or August, 1995, representatives of Bayer Corporation, Columbian Chemical Company, Venture Coke Company L.L.C. and PPG Industries, Inc., located in Marshall County, West Virginia, and Ormet Corporation, located in Monroe County, Ohio, formed the Industrial Sources Group ("ISG"). The ISG represented facilities that are sources, or potential sources, of SO_2 in Marshall County.

4. On August 15, 1995, a meeting was held between representatives of the ISG and the WVDEP Office of Air Quality ("OAQ"). At that meeting the ISG proposed collecting on-site meteorological data for use in dispersion modeling.

5. On September 22, 1995, the WVDEP submitted a letter to the USEPA that committed the WVDEP to develop a comprehensive SIP revision for Marshall County in order to assess the impacts of SO_2 emissions on the National Ambient Air Quality Standards ("NAAQS"). The letter included a schedule for SIP development.

6. On September 25, 1995, the USEPA acknowledge receipt of the OAQ's SIP committal and the schedule for SIP development and found that these documents provided an acceptable basis to modify the Federal Consent Decree schedule for the Kammer Plant's compliance.

7. On December 12, 1995, the ISG submitted the Meteorological Data Protocol for the Marshall County SIP Study ("Met Protocol") to the OAQ.

8. On January 7, 1996, the OAQ approved the Met Protocol.

9. On January 23, 1996, the USEPA approved the Met Protocol.

10. On August 1, 1996, the ISG commenced collection of meteorological data pursuant to the Met Protocol.

11. On July 31, 1997, the ISG completed collection of meteorological data in Marshall County.

12. On October 27, 1997, the ISG submitted the Dispersion Model Protocol For Industrial Sources Group Based In Marshall County, West Virginia ("Model Protocol").

13. On May 5, 1998, the USEPA approved the Model Protocol.

14. On May 20, 1998, the OAQ approved the Model Protocol.

15. On September 18, 1998, the ISG notified the OAQ that the modeling was complete.

16. The results of the dispersion modeling analysis, using an USEPA Region III approved model and procedures, show that sulfur dioxide allowed to be emitted from the

Company under 45 CSR 10 - "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides" may violate or contribute to projected violations of the NAAQS for sulfur dioxide within, or adjacent to the Marshall County area without implementation of the emission limitations, and/or operating limitations and/or stack height requirements set forth in this consent order.

17. The Company operates a CS_2 Flare device known as Process #16. The device is an emergency flare and safety device used to prevent the accumulation of explosive gases in the CS_2 Unit during periods of startup, shutdown and malfunction of the CS_2 Unit. The flare device is operated infrequently for periods of thirty (30) minutes to a total maximum of one hour in a three (3) hour period..

18. During periods when the CS_2 Flare is operational. the H_2S content of the gases flared may exceed the 50 grains per cubic foot as set forth under 45CSR10 §45-10-3. 3.8.d.(1).

19. During periods when the Raw Brine Flare is operational, the H_2S content of the gases flared may exceed the 50 grains per cubic foot as set forth under 45CSR10 §45-10-3. 3.8.d.(1).

20. On August 15, 1973, the then West Virginia Air Pollution Control Commission exempted the CS_2 Flare from the requirements of the 50 grains per cubic foot H2S content of the flared gases. Continuation of the exemption beyond January 1, 1974 would be contingent upon an evaluation, by the Commission, that the operation of the flare may have on ambient air quality impacts. Until now, this evaluation had not been conducted.

21. The Company and the OAQ have cooperated to develop and hereby enter into this consent order to establish sulfur dioxide emission control requirements applicable to the Company sufficient to prevent violations of the NAAQS for sulfur dioxide within, or adjacent to, the Marshall County area.

22. The OAQ shall submit this Consent Order upon entry to EPA and request its incorporation into the State Implementation Plan for the purpose of federal enforceability and to carry out OAQ's responsibility under the West Virginia Code and Federal Clean Air Act, as amended.

III. CONCLUSIONS OF LAW

1. The Office of Air Quality is the Agency empowered and authorized to regulate and control pollution of the air in the State of West Virginia under the supervision of the Director of the Division of Environmental Protection as provided in the Code of West Virginia, Chapter 22, Article 5, Section 1 et seq., and Chapter 22, Article 1, Section 7(3).

2. The Office of Air Quality has acted in accordance with the Code of West Virginia and the rules that it administers.

3. The Office of Air Quality has provided notice and opportunity for public comment and a hearing in accordance with the Code of West Virginia and the federal Clean Air Act, as amended.

4. The Company makes no admission of fact or law in this Consent Order and reserves all rights and defenses available regarding liability or responsibility for the contended exceedences in any proceedings other than proceedings to enforce this Consent Order.

IV. COMPLIANCE PROGRAM

1. The Company agrees that it shall not operate any source of sulfur dioxide emissions unless such source is in compliance with the Code, terms of the consent order, and any additional or more stringent provisions of 45 CSR 10 - "To Prevent and Control Air Pollution From the Emission of Sulfur Dioxides".

2. The Company agrees that at all times, including periods of source start-up, shut down, and malfunction, that it will, to the extent possible, maintain and operate all sources of sulfur dioxide emissions, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

3. Upon the effective date of this consent order, the Company agrees to comply with the following emission and operational limitations:

A. Emissions of sulfur dioxide from Process #004, Inorganics Flare, shall not exceed 91.3 lbs. SO_2/hour.

B. Processes #014 CS_2 Vaporizer A, Process #015 CS_2 Vaporizer B, Process #018, Molten Salt Furnace, and Process #019, Chlorine Recovery shall be fired only with natural gas.

C. Process #016, CS_2 Flare, shall only be operated during periods limited to start-up, shutdown or malfunctions for periods no greater than a total of one (1) hour in any three (3) hour period. The flare shall not be operated for more than a total of three (3) non-contiguous hours in a twenty-four (24) hour period. Each twenty four (24) hour period shall begin at twelve (12) P.M. Emissions of sulfur dioxide from the CS_2 Flare, Process #016, shall not exceed 1011.6 lbs. SO_2/hour during periods of normal start-up and shutdowns. During periods of scheduled maintenance on the CS_2 Unit, the flare is permitted to operate for a period of twenty four (24) continuous hours, with an emission rate not to exceed 6.0 lbs./hour of SO_2. During any such maintenance period, the source shall be subject to the terms and conditions of Sections V.4 and VII.12 of this Consent Order.

D. Emissions of sulfur dioxide from Process #017, Raw Brine Flare, shall not exceed 11.65 lbs. SO_2/hour.

E. Emissions of sulfur dioxide from Process #036, CS_2 Sulfur Recovery Unit, shall not exceed 300 lbs. SO_2/hour. The CS_2 Sulfur Recovery Unit shall

not process more than 2.5 tons of sulfur/hour nor more than 60 tons of sulfur/day.

4. On or after ~~February~~ JUNE 1, 2002, all exhaust gases from Process #004, Inorganics Flare; Process #036, CS_2 Sulfur Recovery Unit; and Process #016, CS_2 Flare shall be exhausted from stacks having heights of sixty five (65) meters above grade, and all exhaust gases from Process #017, Raw Brine Flare, shall be exhausted from a stack having a height of forty (40) meters above grade. Any modifications to the stacks in existence on the date of entry of this Consent Order or replacement of those stacks shall comply with the provisions of 45 CSR 20 "Good Engineering Practice as Applicable to Stack Heights". The Company agrees to comply with this provision in accordance with the following schedule:

<u>Activity</u>	<u>On or Before</u>:
Begin Engineering	September 1, 2000
Complete Engineering	April 1, 2001
Begin Installation	September 1, 2001
Installation, Commissioning and Start-Up Complete	June 1, 2002

V. COMPLIANCE TESTING AND MONITORING REQUIREMENTS

1. Compliance with the emission limitations of this consent order shall be based upon the averaging time and compliance determination methods established within this section.

2. Process #004, Inorganics Flare, shall demonstrate compliance with Section IV.3.A. of this Consent Order by conducting testing of the gas stream sent to the flare within 180 days after the date of entry of this order. Testing shall be conducted twice per year thereafter. The stream will be analyzed for sulfur containing compounds, and the emission rate will be determined assuming 100% conversion and emission of all the sulfur compounds as sulfur dioxide. In addition, the Company shall, on a daily basis, estimate the total mass flow rate into the Inorganics Plant and the concentration of flarable sulfur containing materials.

3. Process #014 CS_2 Vaporizers A, Process #015, CS_2 Vaporizers B, Process #018, Molten Salt Furnace, and Process #019, Chlorine Recovery identified in Section IV.3.B shall demonstrate compliance with the sulfur dioxide emission limitations of this Consent Order by firing only pipeline quality natural gas.

4. Process #016, CS_2 Flare, shall demonstrate compliance with Section IV.3.C. by monitoring and recording on a daily basis the duration, including start and stop times, and the reason for flaring. Within ninety (90) days after the date of entry of this Consent Order, the Company shall submit a protocol to the OAQ, for approval, describing the methodology the Company shall use to determine the sulfur dioxide emissions from the CS_2 Flare during periods of routine start-up, shutdown, and maintenance. Upon written approval by the OAQ, the protocol shall be incorporated as terms and conditions of this Consent order and shall be used to determine compliance with the emission limitations set forth in Section IV.3.C.

5. Process #017, Raw Brine Flare, shall demonstrate compliance with Section IV.3.D.of this Consent Order by conducting testing for the hydrogen sulfide concentration in the

gas stream sent to the flare within one hundred and eighty (180) days after the date of entry of this order. Testing shall be conducted twice per year thereafter. In addition, the company shall, on a daily basis, estimate the flowrate to the Raw Brine Flare and the concentration of H_2S sent to the flare and calculate emissions assuming 100% conversion of H_2S to sulfur dioxide from the unit's flare stack. The Company, upon approval by the OAQ, may use the alternative emission estimation methodology provided for in Section VI.6. of this Consent Order to demonstrate compliance with this Section.

6. Process #036, CS_2 Sulfur Recovery Unit, will demonstrate compliance with Section IV.3.E. of this Consent Order by monitoring and recording on a daily basis the amount of sulfur containing materials entering the recovery unit, the amount of sulfur recovered from the unit and, by mass balance, calculate the emissions assuming 100% conversion of all the unrecovered sulfur compounds as sulfur dioxide from the unit's stack.

7. Within ninety (90) days after the date of entry of this Consent Order, the Company shall submit a protocol to the OAQ, for approval, describing the methodology the Company shall use to determine the sulfur dioxide emissions from the CS_2 Sulfur Recovery Unit during periods of its operation. Upon written approval by the OAQ, the protocol shall be incorporated as terms and conditions of this Consent Order and shall be used to determine compliance with the emission limitations set forth in Section IV.3.E.

8. Sources of sulfur dioxide emissions subject to the testing requirements in Section V.2. and V.5.shall be required to submit a test protocol to the Director, for approval, at least thirty (30) days prior to the projected test dates. The Company shall demonstrate compliance using a reference test method under 40CFR60 Appendix A. When no such method is available, the Company may, in writing, request approval by the Director to use alternative sampling and analytical procedures. The Director shall be provided written notice of the actual test dates, after approval of the test protocol, but not less than fifteen (15) days prior to the date of testing. The Company shall submit the results of the testing, to the Director, within sixty (60) days of completion of the test.

9. No emissions testing shall be required for units that are required to burn natural gas.

10. Should the Director exercise his/her option to conduct emission tests or monitoring, the Company shall provide all necessary sampling connections and sampling ports to be located in such a manner as the Director may require, power for test equipment, safe sampling platforms and safe access to such platforms.

VI. RECORDKEEPING, NOTICES AND REPORTING

1. The Company shall maintain records of the occurrence, date, time and duration of any malfunction in the operation of sources subject to this Consent Order, any malfunction of air pollution control equipment or any periods during which a control device was inoperative.

2. For Process #016, CS_2 Flare, the Company shall maintain the following records:

A. Date, time and duration that the flare was operational.

B. Record of the cause of flaring.

3. For Process #036, CS2 Sulfur Recovery Unit, the Company shall maintain the following records:

A. Daily record of sulfur throughput recorded in pounds per hour and tons per day.

B. Daily record of emissions during any period when the unit was operational.

C. Date, time, duration and magnitude of any emissions in excess of the limits set forth in Section IV.3. E of this order.

4. The Company shall report to the Director, by telephone or telefax, any malfunction of such source or its air pollution control equipment which results in any excess sulfur dioxide emission rate within twenty-four (24) hours of becoming aware of such condition. The Company shall file a written report concerning the malfunction with the Director within ten (10) days, providing the following information:

A. A detailed explanation of the factors involved or causes of the malfunction.

B. The date and time of duration (with starting and ending times) of the period of excess emissions.

C. An estimate of the mass of excess emissions discharged during the malfunction period.

D. The maximum emission rate or concentration measured or otherwise determined during the malfunction in units of the applicable emissions standard.

E. Immediate remedial actions taken at the time of the malfunction to control or mitigate the effects of the malfunction.

F. A detailed explanation of the corrective measures or program that will be implemented to prevent a recurrence of the malfunction and a schedule for such implementation.

5. Within ninety (90) days after the date of entry of this Consent Order, the Company shall submit a protocol to the OAQ, for approval, describing the methodology the Company shall use to estimate the total mass flow rate into the Inorganics Plant and the concentration of sulfur containing compounds. Upon written approval by the OAQ, the protocol shall be incorporated as terms and conditions of this Consent Order and shall be used to determine compliance with the emission limitations set forth in Section IV.3.A.

6. Within ninety (90) days after the date of entry of this Consent Order, the Company shall submit a protocol to the OAQ, for approval, describing the methodology the Company shall use to estimate the total flow rate into the Raw Brine Flare and the concentration of H_2S in the gas stream sent to the flare or, alternatively, estimates of SO_2 emissions from the flare based upon a database of known H_2S concentrations and predictive models. Upon written approval by the OAQ, the protocol shall be incorporated as terms and conditions of this Consent Order and shall be used to determine compliance with the emission limitations set forth in Section IV.3.D.

7. All data and information required to be recorded or obtained under the terms of this Consent Order shall be maintained in a permanent form suitable for inspection and shall be retained for at least five (5) years following the state of the record or report. All such data and information shall be submitted in accordance with the terms of this Consent Order or made available to the Director upon his or her request or during any facility inspection by an authorized representative of the Director.

8. All reports required to be submitted to the Director under the terms of this Consent Order shall be certified by a responsible official of the Company. This certification shall state that, based on information and belief formed reasonable inquiry, the statements and information in the document are true, accurate and complete.

VII. OTHER PROVISIONS

1. In entering this Consent Order agreement, the Company and the OAQ seek to resolve the nonattainment issues identified in Section I. Findings of Fact, but the Company makes no admission of fact or law with regard to those findings.

2. The Company agrees to comply with all requirements of this Consent Order and further agrees to waive any and all rights of appeal of this Consent Order. However, the Company reserves its right to contest any enforcement actions with respect to all alleged violations of the terms and conditions of this Consent Order, or any modifications or amendments thereof.

3. Nothing contained in this Consent Order shall be interpreted in such a manner as to relieve the Company of the responsibility to make all necessary short-term emission reductions as provided and required in Regulation 11 - "Prevention of Air Pollution Emergency Episodes".

4. The provisions of this Consent Order are severable and should any provisions be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

5. This Consent Order is binding on the Company its successors, and assigns.

6. Violations of this Consent Order may subject the Company to penalties and injunctive relief in accordance with the Code of West Virginia.

7. The OAQ agrees that the Company shall have the right to petition for an amendment to this Consent Order in the event of a "force majeure" condition. The petition shall

allege such conditions with specificity. The Director in his or her full and complete discretion, shall determine whether he or she will hear the Company's petition and relief accorded, if any.

8. The Company shall not build, erect, install, or use any article, machine, equipment or process, the user of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

9. The terms and conditions of the Consent Order shall become effective upon signing by both parties.

10. Nothing contained in this Consent Order shall be construed to limit, in any way, the Director's authority to require the Company to install, calibrate, and operate continuous emission monitoring equipment for sources other than those specifically required to have such monitoring equipment under the terms of the Consent Order.

11. For the purpose of the administration of the Consent Order, all decisions and determinations required to be made by the Director of the Division of Environmental Protection may be made by the Chief of the OAQ and all reports and notifications required under this Consent Order shall be submitted to the Chief of the OAQ.

12. The Chief hereby exempts Process #016, CS_2 flare, from the emission limits of 45CSR10 § 45-10-3 3.8 d.1. so long as the Company maintains compliance with the terms and conditions of Section IV.3.C., Section IV.4., Section V.4. and Section VI.2. of this Consent Order. The Chief has considered that the CS_2 Flare is an emergency and safety device used to prevent the buildup of explosive gases in the CS_2 Unit during periods of startup, shutdown and malfunction of the Unit and that the flare is operated infrequently and for time periods of a total of one (1) hour in any three (3) hours period. The Chief has also considered that the emissions from the flare have been modeled conservatively in this demonstration and that the emissions from flaring do not violate NAAQS for SO_2. Failure to comply with Section IV.3.C., Section IV.4., Section V.4. and Section VI.2. of this Consent Order may result in termination of this exemption upon written notice by the Chief.

13. The Chief hereby exempts Process #017, Raw Brine Flare, from the emission limits of 45CSR10 45-10-3 3.8 d.1 so long as the Company maintains compliance with the terms and conditions of Section IV.3.D., Section IV.4., Section V.5., and Section VI.6. of the Consent Order. The Chief has considered that the emissions from the flare have been modeled conservatively in this demonstration and that the emissions from the flare do not violate NAAQS for SO_2. Failure to comply with Section IV.3.D., Section IV.4., Section V.5., and Section VI.6. of this Consent Order may result in termination of this exemption upon written notice by the Chief.

14. Nothing contained in this Consent Order shall be construed, in any manner, to provide relief from the requirements of any permit issued by the Office of Air Quality or the Air Pollution Control Commission prior to the date of this order.

AND NOW, this 21ST day of January, 2000, the Division of Environmental Protection, Office of Air Quality agrees to and enters this Consent Order.

DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY

By Its Chief

PPG INDUSTRIES INC., hereby agrees with the provisions and consents to the terms of this Consent Order and agrees to comply with all requirements set forth herein.

AND NOW, this 25TH day of JANUARY, 2000, the PPG Industries Inc., by its duly authorized representative, consents to , agrees to and enters this Consent Order.

PPG INDUSTRIES INC.

BY: _____
Richard L. Holliday, Works Manager
Natrium Plant